UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT TACOMA

WACOM CO., LTD. and WACOM TECHNOLOGY CORPORATION,

Plaintiffs,

v.

HANVON CORPORATION and HANWANG TECHNOLOGY CO., LTD.,

Defendants.

Case No. C06-5701RJB

PATENT CLAIM CONSTRUCTION ORDER

This matter comes before the Court on the parties' proposed constructions of the asserted patent claims. Dkt. 67; Dkt. 70. The Court has considered the pleadings filed in support of and in opposition to the proposed constructions, the oral arguments of counsel, and the remainder of the file herein.

I. PROCEDURAL HISTORY

On December 11, 2006, Plaintiff Wacom Co., LTD., and Plaintiff Wacom Technology Corporation ("Plaintiffs") filed the complaint alleging Patent Infringement, Violation of 35 U.S.C. § 292, and Unfair Competition, by Defendant Hanvon Corporation and Defendant Hanwang Technology Co., LTD. ("Defendants"). Dkt 1. Plaintiffs claim infringement of six U.S. Patents: RE34,187 ("'187 Patent"); 4,878,553 (as reexamined) ("'553 Patent"); 4,999,461 ("'461 Patent"); 5,134,689 ("'689 Patent"); RE35,329 ("'329 Patent"); and 5,691,513 ("'513 Patent"). *Id.*

On March 30, 2007, the Court issued a scheduling order and set the claim construction

("Markman") hearing for December 7, 2007. Dkt. 27. On September 25, 2007, the parties filed a Joint Claim Construction and Prehearing Statement. Dkt. 45. In that statement, each party proposed a procedure for how the Court should conduct the Markman hearing. *Id.*

On October 30, 2007, each party submitted an opening brief for proposed claim constructions. Dkt. 67 (Defendants), Dkt. 70 (Plaintiffs). Defendants altered some of their proposed claim constructions from the constructions that were set forth in the prior joint statement. *See* Dkt. 76 (Plaintiff's Motion to Strike Late Claim Construction Statement). On November 13, 2007, each party submitted a reply brief for claim constructions. Dkt. 87 (Defendants), Dkt. 91 (Plaintiffs). Plaintiffs replied to Defendants' subsequent, altered constructions. Dkt. 91.

On November 16, 2007, the Court held a Motion Hearing and informed the parties that the Court would adopt the Plaintiffs' proposed procedure for the Markman hearing. Dkt. 99. On November 30, 2007, the parties submitted a Second Proposed Claim Construction Chart and the Court made that chart part of the record. Dkt. 107.

Finally, on December 6, 2007, the Court held the Markman hearing. At that hearing, the parties conceded arguments on some of the disputed terms and also advanced additional arguments in support of their proposed claim constructions.

II. DISCUSSION

A. Claim Construction Law

1. In General

Claim construction is a matter of law and is performed by the court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-971 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). "[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips*, 415 F.3d at 1313. "[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire

patent, including the specification." *Phillips*, 415 F.3d at 1313; *see also Markman*, 52 F.3d at 979 ("Claims must be read in view of the specification, of which they are a part.").

After considering the claim language itself, the Court should review the specification "to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning." *Vitronics*, 90 F.3d at 1582. The specification, as well as other intrinsic evidence, is both more significant and more reliable than extrinsic evidence such as testimony, dictionaries and treatises. *Phillips*, 415 F.3d at 1317-1318. Courts may, however, consider extrinsic evidence such as treatises, inventor testimony, and expert testimony, if the intrinsic evidence is insufficient to construe the claims. *Id*. at 1319.

2. Means-plus-function and Step-plus-function Limitations

35 U.S.C. § 112, paragraph 6 provides that:

> An element of a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

A "means-plus-function" claim term provides "purely functional limitations that do not provide the structure that performs the recited function." *Phillips*, 415 F.3d at 1311. A claim term is presumed to be means-plus-function when the word "means" appears in the claim element. *Callicrate v. Wadsworth Mfg. Co.*, 427 F.3d 1361, 1368 (Fed. Cir. 2005). However, a limitation that uses the word “means” but does not recite a function that corresponds to the means does not invoke § 112, paragraph 6. *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302 (Fed. Cir. 1999)

The construction of a means-plus-function limitation requires two steps. First, the claimed function is determined. *JVW Enters., Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1330 (Fed. Cir. 2005). Second, "the corresponding structure in the written description that performs that function" is identified. *Id*. A court may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function. *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

The step-plus-function limitation is similar to the mean-plus-function limitation, except that a combination of steps are used in "method" claims. *See Masco v. U.S.*, 303 F.3d 1316, 1327 (Fed. Cir. 2002). Where the claim drafter has not signaled the intent to invoke the step-plus-function limitation by

using the "step[s] for" language, "we are unwilling to resort to [35 U.S.C. § 112, paragraph 6 (2000)] to constrain the scope of coverage of a claim limitation without a showing that the limitation contains nothing that can be construed as an act." *Id.* at 1327. The difference between a function and an act is:

> the "underlying function" of a method claim element corresponds to what that element ultimately accomplishes in relationship to what the other elements of the claim and the claim as a whole accomplish. "Acts," on the other hand, correspond to how the function is accomplished.

Seal-Flex, Inc. v. Athletic Track and Court Construction, 172 F.3d 836, (Fed. Cir. 1999).

B. Claim Constructions

While the majority of the technology involved in this case is governed by Faraday's Law of Induction[1], the claim constructions should be governed by Ockham's Razor[2], which states that one should not increase, beyond what is necessary, the complexity required to explain anything. In other words, the public notice function of patent law is best served if these patents stand on their own two feet without the supporting crutch of complicated judicial constructions.

Five of the six asserted patents disclose technology related to determining the position of an indicating device relative to a provided surface. Declaration of Professor Cheng Sun in Support of Plaintiffs' Opening Claim Construction Brief ("Sun Decl."), Dkt 71 at 11. Generally, coils under the provided surface send a signal to the indicating device and, in turn, the indicating device sends a signal back to the surface coils. Dkt. 67 at 3. Defendants contend that some of these patents require the transmission coil and the receiving coil to be the same coil. Dkt 81 at 6-10. The weight of the evidence submitted, including the prior art, the prosecution histories and the patent specifications, supports Defendants' contention.

The Court will first address three common terms for which the parties have proposed identical constructions and which appear throughout the asserted patents. Then, the Court will proceed on a patent by patent basis addressing the remainder of the proposed constructions.

1. Common Terms

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[1] "Faraday's law of induction." Encyclopædia Britannica. 2007. Encyclopædia Britannica Online. 19 Dec. 2007 <http://www.britannica.com/eb/article-9033718>.

[2] "Ockham's razor." Encyclopædia Britannica. 2007. Encyclopædia Britannica Online. 19 Dec. 2007 <http://www.britannica.com/eb/article-9056716>.

There are three common terms that appear in more than one of the asserted patents: (1) AC wave/energy, (2) implement, and (3) tuned/tuning circuit.

a. AC Wave/Energy

The parties dispute the meaning of the term "AC Wave" that appears in the '187 Patent and of the term "AC Energy" that appears in the '329 Patent and '461 Patent. Dkt. 107-2 at 1, 11, 23. The term "AC Energy" also appears in the '689 Patent, but, based on the joint claim construction chart, that term is not disputed. *See Id.* at 17-22. The parties do not dispute that the term "AC" means "alternating current."

The parties' proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
An electric wave created by a current whose magnitude changes over time.	An electric wave created by an electric current that reverses direction in a circuit at regular intervals

See, e.g, Id. at 1.

The Court should first consider the intrinsic evidence. Plaintiffs argue that signal B in Figure 4 of the '187 Patent is an example of an alternating current wave that does not change direction over time. That figure, however, does not provide reference coordinates that show that the signal only changes magnitude and does not change direction. The parties do not offer any other important intrinsic evidence. Thus, the Court should consider extrinsic evidence because the intrinsic evidence is inconclusive.

Each party has submitted a declaration by an expert in the field of electrical engineering. *See* Sun Decl, Dkt. 71 (Plaintiffs' expert); Declaration of Dr. Alexander V. Mamishev ("Mamishev Decl.") (Defendants' expert), Dkt. 69. Plaintiffs' expert declares that an alternating current can change direction, but that there are alternating currents that do not change direction. Sun Decl. ¶26. Plaintiffs' expert cited numerous scientific sources to support his proposition. *Id.* ¶¶24, 26.

Defendants' expert submits that, in the context of the asserted patents, an alternating current must change direction in the electrical circuit. Mamishev Decl. ¶152. Defendants' expert cites a common dictionary to support his proposition. *Id.*

Based on the difference in the cited sources, it would seem that a person of ordinary skill in the art would understand both the ordinary definition submitted by Defendants and the scientific definition submitted by Plaintiffs. Thus, in the context of the asserted patent, Plaintiffs' proposed construction is

most likely the proper construction. Additionally, Plaintiffs raised a new argument toward the end of the Markman hearing involving Faraday's Law of Induction. *See* Sun Decl. ¶60 (discussion of law for different claim term). The asserted patents disclose various technologies that are based on inducing electric current in one coil by another coil. In simple terms, the law of induction states that the current induced in one coil ("coil A") by the current flowing in another coil ("coil B") is proportional to the rate of current change in the inducing coil, coil B. That rate of change in coil B is determinative for the process of inducing a current in coil A. It is irrelevant whether the current in coil B fluctuates between a positive maximum and a positive minimum, a positive maximum and a negative minimum (changes direction), or a negative maximum and a negative minimum. Therefore, a person of ordinary skill in the art would understand that there exists alternating currents that do not change direction and that, in the context of the asserted patents, direction of the current is irrelevant, fluctuation is determinative.

The Court should adopt Plaintiffs' proposed construction that does not include the limitation that the inducing current must change direction. "AC Wave" and "AC Energy" should be construed to mean:

- an electric wave created by a current whose magnitude changes over time.

b. implement

The parties dispute the meanings of the term "implement" that appears in the '187 Patent, '461 Patent, and '689 Patent. Dkt. 107-2 at 5, 15, 21. The parties proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
Cordless, batteryless position designating device containing a resonant circuit.	Input pen

See, e.g, Id. at 5.

"Input pen" is used throughout the patent specifications. *See, e.g.*, '187 Patent col. 5, ll. 6-7; '689 Patent col. 1, l. 46. Plaintiffs argue that its construction is necessary so that implement is understood consistently with the specification. Dkt. 70 at 19. Plaintiffs have failed to show either that "input pen" is inconsistent with the specification or that a person of ordinary skill in the art would not consider an "implement" to mean an "input pen." Therefore, the Court should adopt the Defendants' proposed construction. The term "implement" should be construed as follows:

- input pen.

c. tuned/tuning circuit

The term "tuned circuit" appears in the '187 Patent, '461 Patent, '689 Patent, and '329 Patent and the term "tuning circuit" appears in the '553 Patent. Dkt. 107-2 at 7, 10, 16, 22, 33.

Plaintiffs have proposed that this term should be construed as "[a] circuit having at least one coil (inductor) and at least one capacitor." *Id.* This proposed construction not only fails to account for the "tuned" limitation but also is inconsistent with the description of a tuned circuit stated in the electronics textbook cited by Plaintiffs' expert. *See* Sun Decl. ¶50 *citing* Dkt. 71-7. That electronics textbook describes a "tuned" circuit as a circuit constructed of an inductor and a capacitor in parallel whereas a "trap" circuit is a circuit constructed of an inductor and capacitor in series. Dkt. 71-7 at 4. Moreover, the inductor and capacitor values can be varied to tune the "tuned circuit" to a resonant frequency. *Id.* Thus, Plaintiffs' proposed construction fails to include an important limitation.

At the Markman hearing, Defendants proposed a shorter construction than the construction they offered in the joint claim construction chart (Dkt. 107-7 at 7). After some discussion with the Court, Defendants agreed to the construction of "a circuit, having at least an inductor (coil) and at least a capacitor, that resonates at the circuit's inherent resonant frequency determined by the inductor and capacitor values." Plaintiffs proposed that, if the Court were to adopt that construction, the words "one or more" be added because the value of the capacitor can be varied (*See, e.g.*, '187 Patent col 11, ll. 62-67). Defendants did not object to Plaintiffs' proposal. There is no evidence that a person of ordinary skill in the art would not understand this combination of the parties' proposals. Therefore, the Court should adopt this combined proposal.

The term "tuned circuit" and the term "tuning circuit" should both be construed as follows:

- a circuit, having at least an inductor (coil) and at least a capacitor, that resonates at one or more of the circuit's inherent resonant frequencies determined by the inductor and capacitor values.

2. U.S. Patent No. 4,878,553

U.S. Patent No. 4,878,553 ("'553 Patent") discloses a position detecting apparatus for detecting a position pointed by a pointer. '553 Patent, Abstract.

As an initial matter, Defendants have submitted a preliminary injunction order by U.S. District Judge Alicemarie H. Stotler. *Wacom Co. Ltd. v. CalComp, Inc.*, U.S. Dist. Ct. for the Cent. Dist. of California, Case No. SA CV 97-814 AHS; Davis Decl., Dkt. 68, Exh# 2. In that order, Judge Stotler

construed the claims of this patent. *See Id.* at ¶¶39-71. While that order is not binding on this Court, Judge Stotler gave a thorough and detailed analysis of the '553 Patent specification, the prior art relating to the '553 Patent, and the prosecution history of the '553 Patent. *Id.* at ¶¶47-71. Judge Stotler's most significant conclusion was that "each of the claims of the '553 patent requires that each loop coil in the digitizer tablet both send and receive electromagnetic waves." *Id.* at ¶48 (emphasis in original). Plaintiffs contend that Judge Stotler's order incorrectly adds limitations to the claims of the '553 Patent. Dkt. 70 at 21-25; Dkt. 91 at 15-18.

Plaintiffs argue that the prior art and prosecution history do not limit this patent to coils that both transmit and receive electromagnetic waves. *Id.* Plaintiffs admit that the prior art included tablets that used conductors to transmit, but not to receive, electromagnetic waves, and tablets that receive, but do not transmit, electromagnetic waves. *Id.* at 16. In addition, Judge Stotler referenced prior art that disclosed a tablet with a first set of loop coils that sent electromagnetic waves and a second set of loop coils, perpendicular to the first set, that received electromagnetic waves. Davis Decl., Dkt. 68, Exh# 2 at ¶26 (*referencing* Japanese Laid-Open Patent Application No. 59-3537). Further, in the prosecution history, Plaintiffs argued "[t]he coils of the instant invention, on the other hand, are loop coils used for transmission and reception of signals." Dkt. 89-4 at 12. Therefore, not limiting the claims of this patent to coils that both transmit and receive electromagnetic waves may raise serious questions of invalidity.

Plaintiffs also argue that, based on the concept of claim differentiation, the broadest claims asserted in this patent do not include the same coil limitation. Dkt. 91 at 17; *See Phillips*, 415 F.3d at 1314-15. Plaintiffs cite claim 5 and claim 20 that disclose structures requiring the same coil to both transmit and receive electromagnetic waves. *Id.* At the Markman hearing, Plaintiffs contended that claim 4 states the specific structure that Judge Stotler concluded was the disclosed structure necessary to accomplish the claimed function. Plaintiffs assert that the structural limitations of claims 4, 5, and 20 should not be read into the broader claims of this patent, such as claim 1. Plaintiffs, however, have failed to establish that claim 1 is both novel and non-obvious without the structural limitations disclosed in the simplest embodiment of the invention, the first embodiment. *See* '553 Patent, Figure 1.

Furthermore, even if claim 1 covers an embodiment of the invention that includes fewer structural limitations than the disclosed first embodiment, Plaintiffs have failed to show that that hypothetical

embodiment is enabled by the specification. *See Wang Labs, Inc. V. America Online, Inc.*, 197 F.3d 1377, 1381-1383 (Fed. Cir. 1999). The specification must teach a person of ordinary skill in the art how to practice the disclosed invention. 35 U.S.C. § 112, ¶1. In stripping the simplest disclosed structure of various components, Plaintiffs have not shown that the disclosed invention will actually work as a structure consisting of fewer components.

In summary, Plaintiffs maintain that there is a structure that both overcomes the prior art and includes fewer limitations than the first embodiment of the invention as disclosed in Figure 1 of this patent. The evidence does not support the proposition that whatever that structure may be, that structure is both novel and non-obvious in light of the prior art and is enabled by this specification. Therefore, in general, the Court should adopt Defendants' proposed constructions, which are consistent with Judge Stotler's constructions, for the means-plus-function limitations in this patent.

a. an electric wave detecting means

The term "an electric wave detecting means" appears in claims 1, 2 (dependant on claim 1), 13, and 37. Dkt. 107-2 at 8. The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As discussed above, the Court should adopt Defendants' proposed construction. Therefore, the electric wave detection means should be construed as follows:

- Function:
  - detecting a resonating electric wave generated by the tuning circuit.
- Structure:
  - (a) the same coil (denoted by reference numeral 11 in Figure 1) which transmitted an electric wave in a previous instance;
  - (b) selection circuit (e.g., 20 in Figure 1) which selected a coil for transmitting in a previous instance;
  - (c) connection switching circuit (e.g., 30 of Figure 1); and,
  - (d) a receiving circuit (e.g., 50 in Figure 1).

b. electric wave detecting means

The term "electric wave detecting means" appears in claims 8, 9, 10, 11, 12, 21, and 25 (dependant on claim 21). Dkt. 107-2 at 8. The parties disagree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* Plaintiffs argue that, even though the word "means" appears in these terms, there is sufficient structure in the remainder of the respective claim to rebut the presumption that these are means-plus-function limitations. *See Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1369 (Fed. Cir. 2005). Plaintiffs, however, have failed to rebut the means-plus-function presumption, especially in light of the construction that the Court should adopt for the previous "detecting means" limitations. Therefore, the Court should construe these terms as means-plus-function limitations and adopt Defendants' proposed construction. That construction is the same as stated above for "an electric wave detecting means."

c. an electric wave generating means

The term "an electric wave generating means" appears in claims 1, 2, 8, 9, 10, 11, 12, 13, 21, 25 and 37. Dkt. 107-2 at 8-9. The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction. Therefore, the electric wave detection means should be construed as follows:

- Function:
  - sending an electric wave to said tuning circuit, said tuning circuit resonating with the electric wave from said electric wave generating means to generate another electric wave to be sent to an electric wave detecting means (claims 1, 2, 8, 9, 10, 11, 12, 21, 25, and 37)
  - sending an electric wave to said tuning circuit, said tuning circuit resonating with the electric wave from said electric wave generating means to generate another electric wave to be sent to an electric wave detecting means in said digitizer tablet. (claim 13)
- Structure:
  - (a) a single loop coil (such as the one denoted by reference numeral 11 in Figure 1) that is used for both transmitting and receiving;
  - (b) a selection circuit (e.g., 20 in Figure 1 and detailed structure described in the '553 patent at 4:64-5:10);
  - (c) a connection switching circuit (e.g., 30 in Figure 1 and detailed structure described in the '553 patent at 5:11-29); and,

- (d) a transmitting circuit (e.g., 40 in Figure 1 and detailed structure described in the'553 patent at 5:32-35). (Id at 4:40-5:35; Figure 1.)

d. electronic writing tablet

The term "electronic writing tablet" appears in claim 1. Dkt. 107-2 at 10. The parties' proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
An electronic tablet configured for handwriting or drawing. (Merely selecting characters or menu items is not handwriting or drawing.)	A position detection apparatus. The position is expressed in coordinate values of a writing implement.

Id.

Claim 1 states "[a] position detection apparatus comprising: an electronic writing tablet; . . ." '553 Patent Reexamination Certificate, col 1., ll. 24-25. Defendants contend that the only difference between position detecting and writing is resolution. Dkt. 67 at 31. But, if the Court adopted Defendants' proposed construction, claim 1 would essentially read "a position detection apparatus comprising: [a position detection apparatus] . . ." This construction is tautological and makes no sense.

Plaintiffs argue that Wacom was required to limit the tablet to writing or drawing a picture to overcome the prior art of "glorified keyboards." Dkt. 91 at 35-36. Plaintiffs cite prosecution history that supports their argument. *Id.* Plaintiffs, however, have failed to show that "[m]erely selecting characters or menu items is not handwriting or drawing" is a necessary non-limitation. The Court should adopt the remainder of Plaintiffs' construction.

Therefore, the term "electronic writing tablet" should be construed as follows:

- an electronic tablet configured for handwriting or drawing.

e. position pointer

The term "position pointer" appears in claim 1, 8, 9, 10, 11, 12, 13, 21, 32 (dependant on claim 21), 35 (dependant on claim 21), and 37. Dkt. 107-2 at 10. The parties' proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
Cordless, batteryless position designating device containing a resonant circuit.	Input pen

Id.

Throughout this specification, the "position pointer" is referred to as an "input pen." *See, e.g.*, '553 Patent col. 5, ll. 40-41. Similar to the term "implement" above, Plaintiffs have failed to show either that "input pen" is inconsistent with the specification or that a person of ordinary skill in the art would not consider an "implement" to mean an "input pen." Therefore, the Court should adopt the Defendants' proposed construction. The term "implement" should be construed as follows:

- input pen.

3. U.S. Patent No. RE34,187

U.S. Patent No. RE34,187 ("'187 Patent") discloses a coordinates input system having a tablet and a position designating device such as a stylus pen. '187 Patent, Abstract. Similar to the '553 Patent, Plaintiffs have failed to show that their proposed constructions for these means-plus function limitations both overcome the prior art and are enabled by the specification. Therefore, the Court should adopt Defendants' proposed constructions for these means-plus-function limitations.

a. angle modulate (angle modulation)

At the Markman hearing, Defendants agreed with Plaintiffs' proposed construction. There is no evidence that Plaintiffs' construction is contrary to a meaning given to this term by an person of ordinary skill in the art. Therefore, the Court should adopt Plaintiffs' construction.

"Angle modulate" and "angle modulation" should be construed as follows:

- to shift the phase or frequency of a signal.

b. detecting

The parties dispute the meaning of the claim language that follows:

> detecting the angle modulation of the angle modulated AC wave (claims 60 (dependant on claim 57), and 71); and,
>
> detecting the value of the at least several values of the angle modulation of the angle modulated AC wave (claim 90).

Dkt. 107-2 at 1-2.

Defendants argue that these limitations should be construed as step-plus-function limitations even though the claims do not contain the "step[s] for" language. Dkt. 67 at 19-20. Defendants, however, have failed to show that these limitations are functions as opposed to acts of accomplishing the claimed methods. *See Masco*, 303 F.3d at 1327-1328. For example, claim 57 reads "[a] method of signalling [sic]

the width of a trace resulting from an implement being moved relative to and against a surface." '187 Patent, col. 22, l. 67 to col. 23, l. 1. Defendants have failed to show that "detecting the angle modulation . . ." is more than an act necessary to accomplish the function of "signalling [sic] the width . . ." Therefore, the Court should not consider these limitations as step-plus-function limitations.

Plaintiffs have proposed that the Court construe "detecting" to mean "obtaining a measurable indication of." Dkt. 107-2 at 1. However, for the purposes of this order:

- the Court should decline to construe "detecting" because it is a common, undisputed term.

c. energizing

The parties dispute the meaning of the claim language that follows:

> energizing a coil in proximity to the surface with an AC wave having substantially the same frequency as the resonant frequency (claims 60 (dependant on claim 57), 71 and 90).

Dkt. 107-2 at 2-3.

Defendants argue that these limitations should be construed as step-plus-function limitations even though the claims do not contain the "step[s] for" language. Dkt. 67 at 13-15. Defendants, however, have failed to show that these limitations are functions as opposed to acts of accomplishing the claimed methods. *See Masco*, 303 F.3d at 1327-1328. For example, claim 57 reads "[a] method of signalling [sic] the width of a trace resulting from an implement being moved relative to and against a surface." '187 Patent, col. 22, l. 67 to col. 23, l. 1. Defendants have failed to show that "energizing a coil . . ." is more than an act necessary to accomplish the function of "signalling [sic] the width . . ." Therefore, the Court should not consider these limitations as step-plus-function limitations.

Plaintiffs propose that the Court construe "energizing" to mean "supplying energy to." Dkt. 107-2 at 2. However, for the purposes of this order:

- the Court should decline to construe "energizing" because it is a common, undisputed term.

d. means for detecting

The term "means for detecting" appears in the claims that follow:

> means for detecting the angle modulation of the angle modulated AC wave to indicate trace width (claim 50);
>
> means for detecting indicating the value of the at least several angle modulated values (claim 56);

means for detecting the angle modulation of the angle modulated AC wave to indicate line width (claim 65 (dependant on claim 61));

means for detecting the value of the at least several values of the angle modulation of the angle modulated AC wave to indicate which of the at least several pressures is being exerted on the surface (claim 91).

Dkt. 107-2 at 3-4.

The parties agree that these limitations are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330.

The parties' proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
Function: detecting the angle modulation of an angle modulated AC wave (claims 50 and 65); detecting the angle modulation value of an angle modulated AC wave (claims 56 and 91) Structure: A phase detector, for example as disclosed in col. 6, lines 30-31, col. 8, line 36, col. 10, ll. 55-56; col. 12, ll. 8-11, and Figs. 3 (413) and 10 (413 and 413'), as well as any other phase detection structure disclosed by the patent to a person of ordinary skill in the art for performing this function.	Function: Detecting the coordinate of the pointing device using the electromagnetic wave being transmitted by the tuning circuit. Structure: (a) the same loop coil (*e.g.*, 11 in Figure 2) that in a previous instance transmitted a wave with plural frequencies; (b) a selection circuit (*e.g.*, 603x or 603y in Figure 7), (c) a transmission and reception switch circuit (*e.g.*, 604x or 604y in Figure 7); (d) a phase detector (*e.g.*, 608 in Figure 7); and (e) a filter (*e.g.*, 412 in Figure 3).

Dkt. 107-2 at 3.

i. Function

Plaintiffs have proposed that the portion of the claim language after the word "to" should not be included as limitations for each of the claimed functions. Dkt. 91 at 24. For example, in claim 56, Plaintiff claims that "[a]lthough the end goal of performing the function is to indicate trace width of the implement, indicating trace width is not part of the function itself, and therefore should not be included in the construction of the function." *Id.* Plaintiffs cite no authority for partial construction of the claim language. *Id.* Moreover, Plaintiffs advance no argument for how the notice function of patents is served with an arbitrary reduction of a claim phrase. *Id.* The patent drafter included these limitations. The patent examiner issued the patent with these limitations. Now, at the point of interpretation, Plaintiffs have failed

to show that a person of ordinary skill in the art would ignore these limitations when giving meaning to these claims.

In the Second Proposed Claim Construction Chart, Defendants propose one construction for all four terms. Dkt. 107-2 at 3. Its is unlikely that a person of ordinary skill in the art would understand a generalized definition for claims that recite different language. Defendants, however, originally proposed that the Court should construe these functions as the entire claim language for each of the claims above. *See* Declaration of Harold Davis re: Opening Claim Construction Brief, Dkt. 68, Exh. 3 at 11. The Court should adopt Defendants' original proposed constructions.

Therefore, the function of these claims should be construed as:

- detecting the angle modulation of the angle modulated AC wave to indicate trace width (claim 50);
- detecting indicating the value of the at least several angle modulated values (claim 56);
- detecting the angle modulation of the angle modulated AC wave to indicate line width (claim 61); and,
- detecting the value of the at least several values of the angle modulation of the angle modulated AC wave to indicate which of the at least several pressures is being exerted on the surface (claim 91).

ii. Structure

Defendants' proposed construction, cited above, incorrectly identifies the numbers and figures of the proposed structure in this patent. Defendants' expert, however, correctly identifies the structure according to the patent drawings. Mamishev Decl., Dkt. 69 at ¶91.

Therefore, the structure identified in the specification that is necessary to accomplish the stated function is:

- a single coil (object 13 in Figure 3) that was excited in a previous instance;
- a combined circuit of a NAND gate (object 403 in Figure 7) and reception changeover switches (objects 407 and 408 in Figure 3);
- a filter (object 412 in Figure 3); and,
- a phase detector (object 413 in Figure 3).

Id.

e. means for energizing

The term "means for energizing" appears in the claims that follow:

means for energizing the coil with an AC wave having substantially the same frequency as the resonant frequency (claims 50, 65 (dependant on claim 61), and 91).

Dkt. 107-2 at 4.

The parties agree that the term is governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for these means-plus-function limitations. Therefore, these limitations should be construed as follows:

- Function:
  - energizing the coil with an AC wave having substantially the same frequency as the resonant frequency (claims 50, 65 (dependant on claim 61), and 91).
- Structure:
  - a single coil (object 13 in Figure 3) that is used for both energizing and detecting;
  - the combined structure of a NAND gate (object 403 in Figure 3) and reception changeover switches (objects 407 and 408 in Figure 3); and,
  - an AC source (objects 401 and 402 in Figure 3) which produces an AC with a frequency approximately equal to the resonant frequency of the tuned circuit.

Dkt. 107-2 at 4-5.

f. circuit reactance

Plaintiffs ask the Court to construe the following phrases:

the circuit including a variable reactance controlled in response to the width of a trace produced in response to the pressure of the region on the surface (claim 50);

the circuit including a variable reactance controlled in response to the width of a trace produced by the region on the surface (claim 60);

wherein the reactance is responsive to the pressure exerted by the region on the surface so that the modulation is a function of the pressure exerted by the region against the surface (claims 60 and 65);

the circuit including a variable reactance controlled in response to the width of a trace resulting from the region being on the surface (claim 65); and,

wherein the reactance is responsive to the pressure exerted by the region on the surface so that the modulation is a function of the pressure exerted by the region against the surface (claim 60).

Dkt. 107-2 at 5-7.

Plaintiffs propose that these terms should be construed as "[t]he reactance of the tuned circuit can be varied depending on the pressure of the implement region on the tablet surface, thus indicating a width of a line to be drawn." *Id.* Defendants contend that these terms do not need to be construed. *Id.* Plaintiffs have failed to show that a person of ordinary skill in the art would not understand these terms in their ordinary and customary meaning. Therefore, for the purposes of this order:

- the Court should decline to construe these terms.

h. trace

The term "trace" appears in claims 50, 57, 61, and 70. The parties' proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
A line indicated by a user using the implement. The line does not necessarily appear on the surface of a tablet.	"Trace" means a visible line appearing on the surface of a tablet.

Dkt. 107-2 at 9.

Defendants argue that the intrinsic evidence does not adequately define the word "trace," and, therefore, the Court should look to extrinsic evidence. Dkt. 67 at 33. Defendants claim that the dictionary definition of "trace" is a visible mark made or left by the passage of a thing. *Id.* This definition, however, does not limit the location of the visible mark to the surface of the tablet as Defendants contend.

Plaintiffs have proposed a construction that includes the phrase "[t]he line does not necessarily appear on the surface of the tablet." Dkt. 107-2 at 9. That language is apparently added to counter Defendants' argument. The Court, however, should reject Defendants' argument. Therefore, Plaintiffs' additional language is unnecessary because the term should not be construed to explicitly state what limitations are not present in the patent term.

The Court should adopt the initial portion of Plaintiffs' proposed construction. The term "trace" should be construed as follows:

- a line indicated by a user using the implement.

4. U.S. Patent No. 4,999,461

U.S. Patent No. 4,999,461 ("'461 Patent") discloses a position detecting apparatus for detecting a position pointed by a pointer. '461 Patent, Abstract. Similar to the '553 Patent, Plaintiffs have failed to show that their proposed constructions for these means-plus function limitations both overcome the prior

art and are enabled by the specification. Therefore, the Court should adopt Defendants' proposed constructions for these means-plus-function limitations.

a. exciting and responding

The parties dispute the meaning of the claim language that follows:

> exciting at least some of the coils with AC energy having approximately the same frequency as the resonant frequency (claims 1 and 9);
>
> responding to the amplitude of AC current flowing in at least some of the coils (claim 1);
>
> responding to the changes in AC current amplitude flowing in at least some of the coils a result of the interaction of the tuned circuit and the AC energy exciting the coils to indicate the implement position (claim 9).

Dkt. 107-2 at 11-13.

Defendants argue that these limitations should be construed as step-plus-function limitations even though the claims do not contain the "step[s] for" language. Defendants, however, have failed to show that these limitations are functions as opposed to acts of accomplishing the claimed methods. *See Masco*, 303 F.3d at 1327-1328. For example, claim 1 reads "[a] method of determining the position of an implement in proximity to a tablet." '461 Patent, col. 12, ll. 26-27. Defendants have failed to show that "exciting . . ." or "responding . . ." are more than acts necessary to accomplish the function of "determining the position of . . ." Therefore, the Court should not consider these limitations as step-plus-function limitations.

Plaintiffs have proposed that the Court construe "exciting" to mean "supplying energy to." Dkt. 107-2 at 11. "Exciting" and "responding" are common, undisputed terms. Therefore, for the purposes of this order:

- the Court should decline to construe "exciting" and "responding."

b. means for connecting

The term "means for connecting" appears in the claim that follows:

> means for connecting at least some coils with the AC energy source (claim 19).

Dkt. 107-2 at 13-14.

The parties agree that this term is governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW*

Enters, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for this means-plus-function limitation. Therefore, this limitation should be construed as follows:

- Function:
  - connecting some of the coils to the AC energy source, the source applying approximately the same frequency as the resonant frequency to the coils (claim 19).
- Structure:
  - (a) a selection circuit (e.g., 402x or 402y in Figure 4); and
  - (b) transmission/receiving switching circuit (e.g., 403x or 403y in Figure 4).

Dkt. 107-2 at 13-14.

c. means for exciting

The term "means for exciting" appears in the claim that follows:

means for exciting at least some of the coils with AC energy having approximately the same frequency as the resonant frequency (claim 25).

Dkt. 107-2 at 14.

The parties agree that this term is governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for this means-plus-function limitation. Therefore, this limitation should be construed as follows:

- Function:
  - exciting at least some of the coils with AC energy having approximately the same frequency as the resonant frequency (claim 25).
- Structure:
  - (a) some coils (such as those denoted by reference numerals 11 and 12 in Figure 2), each of which is used for both transmitting and receiving;
  - (b) a selection circuit (e.g., 402x and 402y in Figure 4);
  - (c) a transmission/receiving switching circuit (e.g., 403x or 403y in Figure 4); and,
  - (d) an AC energy source (e.g., 404) for producing an AC wave with a frequency that approximately equals to the resonant frequency (f0) of the tuned circuit.

Dkt. 107-2 at 14.

d. means responsive

The term "means responsive" appears in the claims that follows:

> means responsive to the amplitude of the current in at least some coils for detecting the amplitude value of current flowing in a plurality of the coils and for combining the detected amplitude values of the currents flowing in the plural coils to indicate the position of the implement relative to the surface (claim 19); and,
>
> means responsive to the amplitude of the current flowing in at least some of the coils for detecting the amplitude value fo current flowing in a plurality of the coils and for combining the detected amplitude values fo the currents flowing in the plural coils to indicate the position of the implement relative to the surface (claim 25).

Dkt. 107-2 at 14-15.

The parties agree that the term is governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, Plaintiffs have failed to show that their proposed construction overcomes the prior art and is enabled by the specification. Defendants have added functional and structural limitations above and beyond what their expert declares these terms to require. *Compare* Dkt. 107-2 at 14-15 *with* Mamishev Decl., Dkt. 69 ¶¶116-118. Defendants have failed to show that these additional limitations are consistent with the meaning given to these terms by a person of ordinary skill in the art. Therefore, the Court should adopt Defendants experts' proposed construction for these means-plus-function limitations.

These limitations should be construed as follows:

- Function:
  - detect the amplitude value of current in at least some of the coils and combining the detected amplitude values to indicate the position of the implement relative to the surface (claims 19 and 25).
- Structure:
  - the same loop coil (e.g., 11 or 12 in Figure 2) that in a previous instance transmitted an electric wave of a certain frequency;
  - a selection circuit (402x or 402y in Figure 4);
  - a transmission/receiving selector (403x or 403y in Figure 4);
  - a detector (e.g., 410 in Figure 4); and,
  - a processing unit (e.g., 6 in Figure 5).

Mamishev Decl., Dkt. 69 ¶¶116-118.

5. U.S. Patent No. 5,134,689

U.S. Patent No. 5,134,689 ("'689 Patent") discloses a coordinate input system and an input pen used in the system. '689 Patent, Abstract. Similar to the '553 Patent, Plaintiffs have failed to show that their proposed constructions for these means-plus function limitations both overcome the prior art and are enabled by the specification. Therefore, the Court should adopt Defendants' proposed constructions for these means-plus-function limitations.

a. means for sequentially exciting

The term "means for sequentially exciting" appears in the claims that follows:

> means for sequentially exciting at least some of the coils with AC energy having approximately the same frequency as the resonant frequency (claim 12); and,
>
> means for sequentially exciting at least some of the coils to the AC energy source, the AC energy source having approximately the same frequency as the resonant frequency (claim 20).

Dkt. 107-2 at 17.

The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for these means-plus-function limitations, except that Defendants did not correctly correlate the reference numerals to the structural components disclosed in this patent. *Compare* Dkt. 107-2 at 17 *with* '689 Patent, Figures 1-2. The construction below contains the correct reference numerals.

Therefore, these limitations should be construed as follows:

- Function:
  - sequentially exciting at least some of the coils in the tablet with AC energy having approximately the same frequency as the resonant frequency (claim 12); and,
  - sequentially exciting at least some of the coils in the tablet to the AC energy source, the AC energy source having approximately the same frequency as the resonant frequency (claim 20).
- Structure:
  - (a) some coils (such as those denoted by reference numerals 11 and 12 in Figure 2), each of which is used for both transmitting and receiving;
  - (b) a selection circuit (e.g., 32 or 33 in Figure 1);
  - (c) a transmission/receiving switching circuit (e.g., 34 or 35 in Figure 1); and,

- (d) an AC energy source (e.g., 31) for producing an AC wave with a frequency that approximately equals to the resonant frequency (f0) of the tuned circuit.

b. means responsive

The term "means responsive" appears in the claims that follows:

means responsive to the AC current changes flowing in said same coils that designate the implement position on the tablet and the pressure of the implement on the surface for indicating the implement position on and the pressure of the implement on the surface at the indicated implement positions on the surface (claim 12); and,

means responsive to the AC current changes flowing in said same coils that designate the implement position on the tablet and the pressure of the implement on the surface for indicating the implement position and the pressure of the implement on the surface at positions indicated by the implement on the surface (claim 20).

Dkt. 107-2 at 18-19.

The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for these means-plus-function limitations. Therefore, these limitations should be construed as follows:

- Function:
  - detecting the current flowing in the same coils after they have stopped transmitting electromagnetic wave to the tuning circuit for indicating the implement position and pressure on the tablet surface (claims 12 and 20).
- Structure:
  - (a) the same coil (e.g., 11 or 12 in Figure 2) that has just been excited right before the detecting;
  - (b) a selection circuit (e.g., 32 or 33 in Figure 1);
  - (c) a transmission/receiving changeover circuit (34 or 35);
  - (d) a band-pass filter (e.g., 38 in Figure 1);
  - (e) detectors (e.g., 39, 41 and 42 in Figure 1); and,
  - (f) a control circuit (e.g., 30 in Figure 1).

Dkt. 107-2 at 18-19.

c. responding

The parties dispute the meaning of the claim language that follows:

> responding to the changes in the AC current flowing in said same coils that designate the implement position on the tablet and the pressure of the implement on the surface . . . (claims 1 and 2, 3, and 4, which are dependant on claim 1).

Dkt. 107-2 at 19.

Defendants argue that these limitations should be construed as step-plus-function limitations even though the claims do not contain the "step[s] for" language. Defendants, however, have failed to show that these limitations are functions as opposed to acts of accomplishing the claimed methods. *See Masco*, 303 F.3d at 1327-1328. For example, claim 1 reads "[a] method of determining the position of an implement on a tablet and the pressure of the implement on a surface of a tablet . . ." '629 Patent, col. 14, ll. 55-57. Defendants have failed to show that "responding . . ." is more than an act necessary to accomplish the function of "determining the position of . . . and the pressure of . . ." Therefore, the Court should not consider these limitations as step-plus-function limitations.

Plaintiffs argue that no construction is necessary for these terms. Dkt. 107-2 at 19. Therefore, for the purposes of this order:

- the Court should decline to construe common, undisputed language.

d. sequentially exciting

The parties dispute the meaning of the claim language that follows:

> sequentially exciting at least some of the coils with AC energy having approximately the same frequency as the resonant frequency (claim 1).

Dkt. 107-2 at 20-21.

Defendants argue that this limitation should be construed as a step-plus-function limitation even though the claim does not contain the "step[s] for" language. Defendants, however, have failed to show that this limitation is a function as opposed to an act of accomplishing the claimed methods. *See Masco*, 303 F.3d at 1327-1328. For example, claim 1 reads "[a] method of determining the position of an implement on a tablet and the pressure of the implement on a surface of a tablet . . ." '629 Patent, col. 14, ll. 55-57. Defendants have failed to show that "sequentially exciting . . ." is more than an act necessary to accomplish the function of "determining the position of . . . and the pressure of . . ." Therefore, the Court should not consider these limitations as step-plus-function limitations.

Plaintiffs propose that the Court construe "exciting" to mean "supplying energy to." Dkt. 107-2 at 20. "Sequentially exciting" is common, undisputed language. Therefore, for the purposes of this order:

- the Court should decline to construe "sequentially exciting."

e. the same coils

The term "the same coils" appears in claims 1, 3, 4, 12, 13, 14, 20, and 22. The parties' proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
The coils from which both the implement position on the tablet surface and the pressure of the implement on the surface are derived.	The identical coils which both excite and detect electromagnetic waves.

Dkt. 107-2 at 21.

Plaintiffs have proposed a construction that is consistent with the claim language. *See, e.g.*, '689 Patent, col. 15, ll. 1-15 (portion of claim 1). Defendants have proposed a construction that adds limitations, which are incorporated in other aspects of the claim language, but do not need to be read into these terms. Therefore, the Court should adopt Plaintiffs' proposed construction. The term "the same coils" should be construed as follows:

- The coils from which both the implement position on the tablet surface and the pressure of the implement on the surface are derived.

6. U.S. Patent No. RE35,329

U.S. Patent No. RE35,329 ("'329 Patent") expands upon the tuning circuit technology described in the earlier patents. Sun Decl., Dkt. 71, ¶106. This patent includes numerous claims that the parties agree are means-plus-function limitations. *See* Dkt. 107-2 at 23-32. Unlike the previous patents, this patent specification states that "[a]lthough the structure of the above-described embodiment is arranged in such a manner that one sensing portion performs both the transmission function and receiving function, a structure may be formed such that a transmitting sensing portion and a receiving portion may be *individually provided*." '329 Patent, col. 16, ll. 42-47 (emphasis added). Defendants contend that, although this language mentions individual coil structure, the patent merely states that this structure is possible without disclosing sufficient detail to enable that possible structure. *See Wang Labs*, 197 F.3d at 1381-1383. Defendants are correct; Plaintiffs have failed to show that this possible structure both exists and is enabled

by this specification. Therefore, the Court should adopt Defendants' proposed constructions for these means-plus-function limitations.

a. means for detecting

The term "electric wave detection means" appears in the claims that follows:

> an electric wave detection means for detecting an electric wave reflected by said tuned circuit (claims 86 and 87, which is dependant on claim 86).

Dkt. 107-2 at 23.

The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for these means-plus-function limitations. Therefore, these limitations should be construed as follows:

- Function:
  - detecting an electric wave reflected by the tuned circuit (claims 86 and 87).
- Structure:
  - (a) the same loop coil (denoted by reference numeral 11 in Figure 2), which in a previous instance is used for transmitting or was excited;
  - (b) the same selection circuit (e.g., 603x or 603y in Figure 7);
  - (c) the same transmission and reception switch circuit (e.g., 604x or 604y in Figure 7) as those of the "electric wave generating means"; and,
  - (d) a detector (e.g., 608 in Figure 7).

Dkt. 107-2 at 23.

b. coordinate detection means

The term "coordinate detection means" appears in the claim that follows:

> coordinate detection means responsive to the electric wave reflected from said tool and generated by said generating means for detecting a coordinate corresponding to the position of said tool (claim 86).

Dkt. 107-2 at 23-24.

The parties agree that the term is governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW*

Enters, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for this means-plus-function limitation. Therefore, this limitation should be construed as follows:

- Function:
  - detecting the coordinate of the pointing device using the electromagnetic wave being transmitted by the tuning circuit(claims 86).
- Structure:
  - (a) the same loop coil (e.g., 11 in Figure 2) that in a previous instance transmitted a wave with plural frequencies;
  - (b) a selection circuit (e.g., 603x or 603y in Figure 7);
  - (c) a transmission and reception switch circuit (e.g., 604x or 604y in Figure 7); and
  - (d) a phase detector (e.g., 608 in Figure 7).

Dkt. 107-2 at 23-24.

c. generating means

The term "electric wave generating means" appears in the claims that follows:

electric wave generating means for generating an electric wave with plural frequency components (claims 86 and 87, which is dependant on claim 86).

Dkt. 107-2 at 24.

The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, Plaintiffs have failed to show that their proposed construction overcomes the prior art and is enabled by the specification. Defendants have added functional and structural limitations above and beyond what their expert declares these terms to require. *Compare* Dkt. 107-2 at 24 *with* Mamishev Decl., Dkt. 69 ¶60. Defendants have failed to show that these additional limitations are consistent with the meaning given to these terms by a person of ordinary skill in the art. Therefore, the Court should adopt Defendants experts' proposed construction for these means-plus-function limitations.

These limitations should be construed as follows:

- Function:
  - generating an electric wave with plural frequency components, one having a value equal to said resonant frequency (claim 86).

- Structure:
  - (a) the same loop coil (denoted by reference numeral 11 in Figure 7) used for both generating and detecting;
  - (b) a selection circuit (e.g., 603x or 603y in Figure 7);
  - (c) a transmission and reception switch circuit (e.g., 604x or 604y in Figure 7); and,
  - (d) a signal generating circuit (e.g., 602 in Figure 7).

Mamishev Decl., Dkt. 69 ¶60.

d. electronic writing tablet

The term "electronic writing tablet" appears in claim 86. Dkt. 107-2 at 24. The parties' proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
An electronic tablet configured for handwriting or drawing. (Merely selecting characters or menu items is not handwriting or drawing.)	A position detection apparatus. The position is expressed in coordinate values of a writing implement.

Id.

Claim 86 states "[a]n electronic writing tablet apparatus comprising: a writing surface, . . ." '329 Patent, col 26, ll. 17-18. Defendants contend that the only difference between position detecting and writing is resolution. Dkt. 67 at 31. Plaintiffs argue that it was required to limit the tablet to writing or drawing a picture to overcome the prior art of "glorified keyboards." Dkt. 91 at 35-36. Plaintiffs cite prosecution history that supports their argument. *Id.* Plaintiffs, however, have failed to show that "[m]erely selecting characters or menu items is not handwriting or drawing" is a necessary non-limitation. The Court should adopt the remainder of Plaintiffs' proposed construction.

Therefore, the term "electronic writing tablet" should be construed as follows:

- an electronic tablet configured for handwriting or drawing.

e. means for sensing the presence of the tool

The parties dispute the meaning of the claim language that follows:

> means for sensing the presence of the tool relative to said writing surface, said means including electric wave generating means for generating an electric wave for generating an electric wave with plural frequency components, one having a value equal to said resonant frequency, and an electric wave detection means for detecting an electric wave reflected by said tuned circuit;

> said sensing means including coordinate detection means responsive to the electric wave reflected from said tool and generated by said generating means for detecting a coordinate corresponding to the position of said tool(claim 86).

Dkt. 107-2 at 24-26.

The parties agree that the term is governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. The parties agree that the structure necessary to accomplish the function is the electric wave generating means, electric wave detection means, and coordinate detection means. Dkt. 70 at 36. Thus, the Court must only determine the function of this limitation.

Defendants have proposed that "the presence of the tool" should be construed to mean "proximity of the tool." Dkt. 107-2 at 24-26. Plaintiffs have proposed that "the presence of the tool" should be construed to mean "position of the tool." *Id.* Plaintiffs' proposal is more consistent with the claim language. *See* '329 Patent, col. 26, l. 32.

The parties also disagree whether the construction should be "relative to the tablet" (Plaintiffs) or "relative to the writing surface" (Defendants). Because the claim reads "an electronic writing tablet apparatus comprising; a writing surface . . .", the Court should combine the parties proposals.

Therefore, this limitation should be construed as follows:

- Function:
  - sensing the position of the tool (pointing device) relative to the tablet's writing surface (claim 86).
- Structure:
  - electric wave generating means;
  - electric wave detection means; and,
  - coordinate detection means.

Dkt. 107-2 at 24-25.

f. means for sensing changes in the current flowing

The parties dispute the meaning of the claim language that follows:

> means for sensing the changes in the current flowing in the coil arrangement at said first and second frequencies (claims 12 and 13, which are dependant on claim 9);
>
> means for sensing changes in the current flowing in the coil arrangement at said different frequencies (claim 29); and,

means for sensing the change in the current flowing in the coil arrangement (claims 89 and 90, which are dependant on claim 88).

Dkt. 107-2 at 26.

The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for these means-plus-function limitations. Therefore, these limitations should be construed as follows:

- Function:
  - sensing the changes in the current flowing in the coil arrangement at said first and second frequencies and responding to the current changes at said first and second frequencies for deriving a signal indicative of coordinates of the tool means relative to the table and coil means (claim 9);
  - sensing changes in the current flowing in the coil arrangement at said different frequencies and responsive to the current changes at said frequencies for deriving a signal indicative of the position and characteristic of the implement on the tablet (claim 29); and,
  - sensing the change in the current flowing in the coil arrangement and responding to the current change for deriving a signal indicative of coordinates of the tool means relative to the tablet and coil means (claim 88).
- Structure:
  - (a) the same loop coil (e.g., 11 in Fig. 7) that in a previous instance transmitted an electric wave of a certain frequency;
  - (b) a selection circuit (e.g., 603x or 603y in Figure 7);
  - (c) a transmission and reception switch circuit (e.g., 604x or 604y in Figure 7); and
  - (d) a phase detector (e.g., 608 in Figure 7).

Dkt. 107-2 at 26-27.

g. means for responding

The parties dispute the meaning of the claim language that follows:

[means for] responding to the current changes at said first and second frequencies for deriving a signal indicative of coordinates of the tool means relative to the tablet and coil means (claims 12 and 13, which are dependant on claim 9) ;

[means] responsive to the current changes at said frequencies for deriving a signal indicative of the position and characteristic of the implement on the tablet (claim 29); and,

[means for] responding to the current change for deriving a signal indicative of coordinates of the tool means relative to the tablet and coil means (claims 89 and 90, which are dependant on claim 88).

Dkt. 107-2 at 27-28.

The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for these means-plus-function limitations. Therefore, these limitations should be construed, in the language of the claims, as follows:

- Function:
  - responding to the current changes at said first and second frequencies for deriving a signal indicative of coordinates of the tool means relative to the tablet and coil means (claim 9);
  - responding to the current changes at said frequencies for deriving a signal indicative of the position and characteristic of the implement on the tablet (claim 29); and,
  - responding to the current change for deriving a signal indicative of coordinates of the tool means relative to the tablet and coil means (claim 88).
- Structure:
  - (a) the same loop coil (*e.g.*, 11 in Fig. 7) that in a previous instance transmitted an electric wave of a certain frequency;
  - (b) a selection circuit (*e.g.*, 603x or 603y in Figure 7);
  - (c) a transmission and reception switch circuit (*e.g.*, 604x or 604y in Figure 7); and
  - (d) a detector (*e.g.*, 608 in Figure 7).

Dkt. 107-2 at 27-28.

h. means for supplying

The parties dispute the meaning of the claim language that follows:

means for supplying AC energy at the first and second resonant frequencies to the coil arrangement (claims 12 and 13, which are dependant on claim 9);

means for supplying AC energy at the plural different resonant frequencies to the coil arrangement (claim 29);

means for supplying AC energy having first and second frequency components to the coil arrangement (claims 89 and 90, which are dependant on claim 88).

Dkt. 107-2 at 28-29.

The parties agree that these terms are governed by 35 U.S.C. § 112, ¶ 6. *Id.* The Court must therefore first determine the function and then identify the corresponding structure that performs that function. *JVW Enters*, 424 F.3d at 1330. As described above, the Court should adopt Defendants' proposed construction for these means-plus-function limitations. Therefore, these limitations should be construed as follows:

- Function:
  - supplying AC energy at the first and second resonant frequencies to the coil arrangement (claim 9);
  - supplying AC energy at plural different resonant frequencies to the coil arrangement (claim 29);
  - supplying AC energy having first and second frequency components to the coil arrangement (claim 88).
- Structure:
  - (a) the same loop coil (denoted by reference numeral 11 in Figure 2) used for both generating and detecting;
  - (b) a selection circuit (e.g., 603x or 603y in Figure 7);
  - (c) a transmission and reception switch circuit (e.g., 604x or 604y in Figure 7); and
  - (d) a signal generating circuit (e.g., 602 in Figure 7).

Dkt. 107-2 at 28-29.

i. sensing and supplying in claim 37

Claim 37 includes the limitations that follow:

> sensing changes in the current flowing in the coil arrangement at said different frequencies and responding to current changes at said frequencies for deriving a signal indicative of the position and characteristic of the implement on the tablet;
>
> supplying AC energy at the plural different resonant frequencies to the coil arrangement.

Dkt. 107-2 at 30-31, 31-32.

Defendants argue that these limitations should be construed as step-plus-function limitations even though the claim does not contain the "step[s] for" language. Defendants, however, have failed to show that these limitations are functions as opposed to acts of accomplishing the claimed method. *See Masco*, 303 F.3d at 1327-1328. Claim 37 reads "[a] method of identifying a characteristic and position of an

implement on a position sensing tablet . . .” ‘329 Patent, col. 20, ll. 48-49. Defendants have failed to show that “sensing . . .” or “supplying . . .” are more than acts necessary to accomplish the function of “identifying a characteristic and position . . .” Therefore, the Court should not construe these limitations as step-plus-function limitations.

Plaintiffs argue that no construction is necessary for these terms. Dkt. 107-2 at 30, 31-32. “Sensing” and “supplying” are common, undisputed language. Therefore,

- the Court should decline to construe “sensing” and “supplying.”

j. writing surface

The term “writing surface” appears in claim 86. Dkt. 107-2 at 32. Defendants argue that the Court does not need to construe this term. Plaintiffs have proposed that the term be construed as “[a] surface of an electronic writing tablet.” *Id.* Plaintiffs argue that a construction is necessary to avoid “jury confusion and potential error.” Dkt. 70 at 39. Even if juror confusion was the standard for claim construction, it is highly unlikely that, in the context of this case, the term “writing surface” would be a catalyst for juror confusion. Plaintiffs have failed to show that, in light of the specification, a person of ordinary skill in the art would understand this term to have a meaning other than the ordinary and customary meaning “writing surface.” Therefore,

- the Court should decline to construe “writing surface.”

k. tool for modifying

The phrase “tool for modifying an image on the surface including a tuned circuit having a resonant frequency” appears in claim 86. Dkt. 107-2 at 33. Defendants proposed a new construction for this phrase at the Markman hearing. The parties’ proposed constructions are:

Plaintiffs’ Construction	Defendants’ Construction
A cordless tool, having a tuned circuit with a resonant frequency, for modifying a displayed image. Dkt. 107-2 at 33	tool

“Writing tool” is used throughout the specification. ‘329 Patent, col. 2, l. 13 (“called a ‘writing tool’ hereinafter in this specification”). Moreover, this tool should not be construed as an “input pen” because the tool disclosed in this patent may be used as an instruction rod, a marker, or an eraser. *Id.* at col.2, l. 12.

Plaintiffs have proposed a wordy construction. Plaintiffs, however, have failed to show that, in light of the specification, a person of ordinary skill in the art would understand this term to have a meaning other than the ordinary and customary meaning of "tool" or "writing tool." Defendants have proposed a construction that is more consistent with the specification. Therefore, the Court should adopt Defendants' proposed construction. This term should be construed as:

- tool.

7. U.S. Patent No. 5,691,513

U.S. Patent No. 5,691,513 ("'513 Patent") discloses a scanning method resulting in high speed and correct operation in a coordinate data detecting process. '513 Patent, Abstract.

a. succeedingly selecting

The limitation "succeedingly selecting one from the sensor coils" appears in claim 1. Dkt. 107-2 at 34. Defendants proposed a new construction for this limitation at the Markman hearing. The parties' proposed constructions are:

Plaintiffs' Construction	Defendants' Construction
to select only one coil at a time in the plurality of sensor coils arranged parallel to the detecting direction. Dkt. 107-2 at 34	to select only one coil at a time in the plurality of sensor coils.

While it is unique that Plaintiffs' are arguing that the Court include a limitation that Defendants propose is unnecessary, Defendants have not advanced a convincing reason to exclude the limitation "arranged parallel to the detecting direction." The antecedent "the" before the term "sensor coils" in the disputed claim language clearly refers to the previously stated "plurality of sensor coils arranged parallel to the detecting direction." Therefore, the Court should adopt Plaintiffs' proposed construction. This term should be construed as follows:

- to select only one coil at a time in the plurality of sensor coils arranged parallel to the detecting direction.

Dkt. 107-2 at 34

b. pointing device

The term "pointing device" appears in claims 8 and 9, which are dependant on claim 1. Dkt. 107-2 at 34. In the joint claim construction chart, Defendants stated that they did not believe that this term

needed to be construed. *Id.* At the Markman hearing, Defendants proposed that this term be construed as an "input device." While this proposal is somewhat consistent with the previous construction of "input pen," the term "coordinate data input device" appears frequently throughout this patent. Having multiple "input" devices would only lead to additional confusion.

Plaintiffs have proposed that the Court should construe this term to mean "[c]ordless, batteryless position designating device containing a resonant circuit." *Id.* Plaintiffs, however, have failed to show that, in light of the specification, a person of ordinary skill in the art would understand this term to have a meaning other than the ordinary and customary meaning of "pointing device."

Therefore, for the purposes of this order,

- the Court should decline to construe "pointing device."

III. CONCLUSION

The claim construction chart that accompanies this order summarizes the constructions that the Court should adopt.

IV. ORDER

Therefore, it is hereby

ORDERED that the claims of U.S. Patent RE34,187; 4,878,553 (as reexamined); 4,999,461; 5,134,689; RE35,329; and 5,691,513 are construed as explained above.

The Clerk is directed to send uncertified copies of this Order to all counsel of record and to any party appearing *pro se* at said party's last known address.

DATED this 21st day of December, 2007.

ROBERT J. BRYAN
United States District Judge